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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,430	11/30/2000	Mehryar Khalili Garakani	2705-130	6082

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EXAMINER
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SWICKHAMER, CHRISTOPHER M

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/728,430

Applicant(s)

GARAKANI ET AL.

Examiner

Christopher M Swickhamer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 10 and 18 are objected to because of the following informalities: In line 1, the claim should read *-An apparatus-* instead of "Apparatus." Appropriate correction is required.

### ***Specification***

2. The specification is objected to for failing to identify the serial number of the co-pending U.S. Patent Application..

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-5, 8, 13 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 3 recites the limitation "the end-to-end layer" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claims 8, 13 and 16 have a similar deficiency. It is not clear how terminating the end-to-end layer corresponds to the other claimed limitations. The claims will be examined as best understood by the Examiner.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shaffer et al (hereafter Shaffer).

- Referring to claims 1 and 14, Shaffer discloses a two-pass method for achieving maximal data compression for a voice frame modem relay channel (telephony over the Internet) within a voice frame network (IP network) between two endpoint modems (Fig. 5, col. 2, lns. 17-40, col. 7, lns. 45-50, col. 8, lns. 55-63), wherein each modem is operatively coupled with an associated gateway thereby defining an endpoint segment including an endpoint modem and its associated gateway (Fig. 5A, gateway X and Y), the method comprising: first negotiating maximal data compression parameters for either of the two endpoint segments (col. 7, lns. 1-30); communicating such maximal data compression parameters for at least one of the two endpoint segments to the other of the two endpoint segment (col. 7, lns. 15-30); and second negotiating maximal end-to-end data compression parameters for the modem relay channel based upon the first negotiated maximal data compression parameters for the two endpoint segments (col. 7, lns. 20-45).

- Referring to claims 2 and 15, Shaffer discloses the method of claims 1 and 14, which further comprise: transitioning the channel from a voice mode into a modem relay mode of

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operation (transition the signal from a standard telephony signal, into a digitized signal to be transmitted by a modem over a data network, col. 8, lns. 55-63).

- Referring to claims 3 and 16, Shaffer discloses the method of parent claims 2 and 15, wherein said transitioning includes, terminating the end-to-end layer between the two modems (determine the capabilities of all intermediate devices between the sending and receiving device, col. 7, lns. 1-30) and third negotiating at either segment a local physical layer between the two modems and their associated gateways (setup the connection through the devices and their gateways based on the determined capabilities, col. 7, lns. 40-col. 8, lns. 3).

- Referring to claim 4, Shaffer discloses the method of claim 3, wherein said third negotiating at one of the endpoint segments of a corresponding physical layer is delayed until said communicating is completed (setting up the connection occurs after the capabilities of all devices has been completed, col. 7, lns. 1-30).

- Referring to claim 5, Shaffer discloses the method of claim 4, wherein said third negotiating is delayed by a refusal of the endpoint segment receiving the communicated maximal compression parameters to respond to commands from the endpoint segment performing said communicating (the system inherently tries to determine the capabilities of the receiving endpoint, however if the endpoint cannot be determined all of the way to the endpoint, this would induce a delay, and force the system to maximize the system to the receiver's approximate location, col. 7, lns. 30-38).

- Referring to claims 6 and 17, Shaffer discloses the method of parent claims 1 and 16 which further comprises inherently storing the end-to-end data compression parameters

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(signaling message) for the modem relay channel (entire connection) in a memory as an end-to-end negotiation coding scheme (posture, col. 7, lns. 20-30).

- Referring to claims 7 and 18, Shaffer discloses a method of maximizing data compression between two modems in a voice frame network wherein each of the two modems is operatively coupled with an associated gateway defining a segment (Fig. 5, col. 7, lns. 53-col. 8, lns. 3, col. 8, lns. 55-63), the method comprising: first negotiating at a first segment the maximum data compression to determine the maximum data compression capability of the first segment and communicating the determined capability from the first segment to a second segment (col. 7, lns. 1-30); second negotiating at the second segment the maximum data compression to determine the maximum data compression capability of the second segment (col. 7, lns. 1-30); determining the maximum end-to-end data compression capability of a channel between the two modems; renegotiating at the first segment the determined maximum end-to-end data compression capability of the channel with respect to the first segment (col. 7, lns. 39-45).

- Referring to claims 8 and 19, Shaffer discloses the method of parent claims 7 and 18 which further comprises: terminating the end-to-end layer between the two modems (determine the capabilities between devices); and negotiating at either segment a local physical layer between the two modems and their associated gateways, thereby transitioning the channel into a modem relay mode of operation (set up a connection based on the capabilities, col. 7, lns. 1-30).

- Referring to claims 9 and 20, Shaffer discloses the method of parent claims 7 and 19 which, after said renegotiating, further comprises: inherently storing in a memory an end-to-end coding scheme (negotiation posture) from the signaling message of the two modems

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representative of the maximum end-to-end data compression capability of the channel (col. 7, lns. 20-45).

- Referring to claim 10, Shaffer discloses an apparatus for maximizing data compression between two endpoint modems in a voice frame network (IP network) defining a channel therebetween (channel for telephony over the Internet, Fig. 5, col. 8, lns. 55-63), wherein each of the two modems is operatively coupled with an associated gateway (Fig. 5, gateways X and Y), with each modem and its associated gateway defining a segment, the apparatus comprising: a dual first-pass negotiation mechanism for independently determining the maximal data compression capability of each segment (col. 7, lns. 1-30); an end-to-end data compression capability determination mechanism for determining the maximal end-to-end data compression capability based at least in part upon the independently determined maximal data compression capability of each segment (col. 7, lns. 1-30); and a second-pass negotiation mechanism for establishing the determined maximal end-to-end data compression capability for the channel (col. 7, lns. 20-45).

- Referring to claim 11, Shaffer discloses the apparatus of claim 10 which further inherently comprises: an end-to-end coding scheme (negotiation posture) storage mechanism for storing in a memory the determined maximal end-to-end data compression capability for the channel based on the signaling message (col. 7, lns. 20-30).

- Referring to claim 12, Shaffer discloses the apparatus of claim 10, which further comprises: a modem relay connector for transitioning the channel to a modem relay mode of operation (transition the channel from a voice channel to a channel suitable for telephony over the Internet, col. 8, lns. 55-63).

- Referring to claim 13, Shaffer discloses the apparatus of claim 12, wherein said modem relay connector includes a local proxy negotiation mechanism (Gateway) for terminating the end-to-end layer (signaling message indicating the capabilities in the system) between the two modems and for negotiating at either segment a local physical layer between the two modems and their associated gateways (col. 7, lns. 53-col. 8, lns. 3).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Graf et al, USP 6,671,367 B1. *Capability Negotiation in a Telecommunications Network.*
- Knappe et al, USP 6,603,774 B1. *Signaling and Handling Method for Proxy Transcoding of Encoded Voice Packets in Packet Telephony Applications.*
- Blomfield-Brown et al, USP 6,292,840 B1. *Voice/Audio Data Communication with Negotiated Compression Scheme and Data Header Compressed in Predetermined Scheme.*
- Broughton et al, SP 5,131,016. *Communications Network Data Compression Control System and Method.*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M Swickhamer whose telephone number is (703) 306.4820. The examiner can normally be reached on 8:00-4:30 M-F.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMS  
February 11, 2004



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